Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

UNITED STATES DEPARTMENT OF AGRICULTURE

BULLETIN No. 315

Contribution from Office of Markets and Rural Organization,
CHARLES J. BRAND, Chief

Washington, D. C. ▲ October 23, 1915

CANTALOUPE MARKETING IN THE LARGER CITIES, WITH CAR-LOT SUPPLY, 1914.

By Wells A. Sherman, *Specialist in Market Surveys;* A. Dexter Gail, Jr., *Assistant in Market Surveys,* and Faith L. Yeaw, *Laboratory Aid.*

CONTENTS.

	Page.		Page.
Introduction	1	Some trade factors influencing the marketing of cantaloupes	11
Extent of investigations	1	Cantaloupe shipments in 1914	15
Systems of distribution within cities	2		
Factors which influence prices	3		

INTRODUCTION.

In the market survey work carried on by the Office of Markets and Rural Organization considerable attention has been given to the marketing of cantaloupes. During the summer of 1914 a study was made in a number of the larger markets of the East and Middle West in an effort to determine the factors that underlie the successful handling and marketing of this crop.

The 1914 season was a very disastrous one to practically all cantaloupe-shipping sections, and, while the marketing difficulties encountered were, in most cases, the same as in former years, they were accentuated greatly by unusual conditions surrounding crop production and consumptive demand.

EXTENT OF INVESTIGATIONS.

To secure comprehensive data, representatives of the office [1] were located for various lengths of time in Chicago, St. Louis, Cleveland, Pittsburgh, Milwaukee, St. Paul, New Haven, Cambridge, Hartford, and Kansas City. In addition, general information was secured in Buffalo and Minneapolis.

[1] These studies were carried on by the following market reporters: J. W. Fisher, jr., J. H. Collins, R. Maynard Peterson, G. P. Warber, Grafton L. Wilson, Joseph W. McNaugher, and M. M. Stewart.

Note.—This bulletin should be of general interest to cantaloupe growers, shippers, dealers, and consumers, and to transportation companies.

7710°—Bull. 315—15——1

The distribution of a number of cars of cantaloupes was traced so far as was possible from the car-lot receiver in the market to the consumer, records being made of all changes in possession or ownership and of added charges. In a number of instances it was possible to secure these data from the time the carload of cantaloupes left the point of production. While practical difficulties made it impossible to make the record complete, an endeavor was made to secure the following items of information, so far as they applied, on each car traced: Car number and initials; point of origin; consignor; consignee; selling fees of the marketing association, distributor, local buyer, or solicitor; date of shipment; date of arrival on market; date car was opened; date released; freight; refrigeration; switching charges; demurrage; condition of stock on arrival; cartage charges; gross profits of brokers, wholesalers or commission merchants, jobbers and retailers.

It can be seen readily that as the distribution of a car of cantaloupes in a city progressed, the difficulty of tracing the individual crates greatly increased. The cooperation of the wholesaler or the commission merchant who received the car was all that was required to secure a record of the initial sales, but as the carload was distributed among scores of jobbers, retail grocers, fruit stands, hucksters, and push-cart men, it became impossible for one worker to follow all the crates. Consequently the part of the carload traced through the retailer was small when compared with the number of crates sold by the car-lot receivers and jobbers on which it was possible to secure a record.[1]

In addition to the above outlined work on specific cars of cantaloupes, observations were made of all apparent factors which affected the cantaloupe market, either favorably or adversely, in the cities visited, such as the comparative receipts from the various competing areas, the order of the appearance of these shipments on the market, the quality and quantity of receipts, the preference of particular markets for the different varieties and grades of cantaloupes, the margin of profit, and general weather conditions.

SYSTEMS OF DISTRIBUTION WITHIN CITIES.

Where investigations were made, it was found that in the car-lot marketing of cantaloupes there were several channels of distribution after the car reached its destination. The three routes or channels here given seemed best defined:

I.	II.	III.
1. Broker.	1. Broker.	1. Wholesaler or commission merchant.
2. Wholesaler or commission merchant.	2. Jobber.	2. Jobber.
3. Jobber.	3. Retailer.	3. Retailer.
4. Retailer.	4. Consumer.	4. Consumer.
5. Consumer.		

[1] Acknowledgment is made of the helpful spirit shown by the large number of produce merchants who aided in the above work by allowing the office free access to their books, sales records, etc., and otherwise cooperated in securing necessary data.

Many firms, particularly those located in other than the larger markets, combine the functions of the wholesaler and jobber [1] by selling either to the jobber or the retailer as the occasion demands. Thus, for instance, in the first channel cited, it is not correct to assume that there are necessarily four separate agencies of distribution concerned. However, it must be understood that when a firm sells to both jobbers and retailers, the prices named to the latter, who usually buy in small quantities, are, as a rule, higher than those charged the jobbers.

In most markets the broker figures more prominently in the distribution of western cantaloupes than of eastern stock, and it is safe to say that a much larger percentage of cars shipped from the West are handled by city firms on consignment than is the case with those originating at points east of the Mississippi. The practice of wholesale buying of eastern cantaloupes may be partially explained by their lower delivered cost compared with that of western stock. The dealer has to invest less money and his risks are fewer.

FACTORS WHICH INFLUENCE PRICES.

CAR-LOT RECEIPTS.

The daily receipts of car lots of cantaloupes naturally play an important part in determining prices. On the average large market, these receipts are from several widely separated producing sections.

Table 1 shows how far-distant producing sections will compete with near-by areas on the same market in spite of great differences in freight and transportation rates.

TABLE 1.—*States from which cantaloupes were quoted in New York and Chicago on August 1, 8, and 15, 1914.*

NEW YORK CITY.			CHICAGO.		
Aug. 1.	Aug. 8.	Aug. 15.	Aug. 1.	Aug. 8.	Aug. 15.
Maryland.	New Jersey.	New Jersey.	Indiana.	Illinois.	Illinois.
Virginia.	Delaware.	Delaware.	Illinois.	Michigan.	Michigan.
North Carolina.	Maryland.	Maryland.	Arkansas.	Indiana.	Indiana.
Arizona.	Virginia.	Virginia.	Nevada.	Texas.	Delaware.
Nevada.	Arizona.	North Carolina.	Arizona.	New Mexico.	Maryland.
	Nevada.	Texas.	California.	Arizona.	Texas.
	Texas.	Nevada.		Nevada.	New Mexico.
		California.		California.	California.

Thus it can be seen that there is a great range in the location of the shipping sections and in the distances which the cantaloupes must be transported before being offered for sale. Cantaloupes from Cali-

[1] The use of the terms "wholesaler" and "jobber" in this bulletin conforms to the meaning given them in the eastern and some of the middle-western markets where the wholesaler buys in large quantities, usually in car lots, and disposes of most of his stock in sales of good size to jobbers and large retailers. The jobber, as a rule, buys in smaller amounts from the car-lot receiver and sells mainly to the retail trade. See U. S. Department of Agriculture Bul. 267, Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets. 1915.

fornia were on the New York market with those from Maryland; a section distant more than 3,000 miles competing with a shipping area only some 200 miles away. On August 15, Texas points, 2,100 to 2,200 miles distant from New York City, were sending their melons to compete with those from New Jersey. New Mexico and Nevada compete with Indiana and Illinois for preference on the Chicago market. A good example of the competition between different producing areas is shown by the conditions on August 15 in the city of Chicago, when the melons from eight different States were quoted as being in direct competition with each other. It is interesting to note the wide area represented with Michigan in the North,

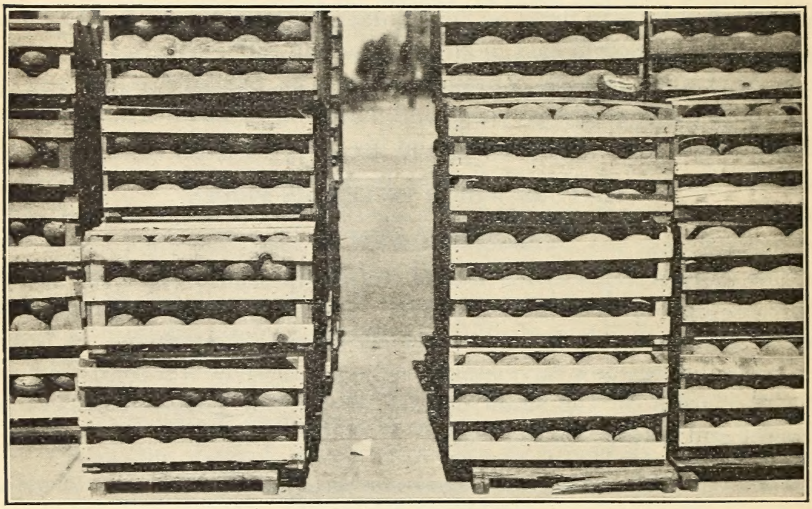


FIG. 1.—Well graded and packed cantaloupes on the right. Crates at the left show shrinkage and the melons are jumbled, due to slack packing at point of production. Both lots were being sold by one commission firm, the crates at the right at a substantial profit and the ones at the left for less than transportation charges.

Texas in the Southwest, California in the West, and Delaware and Maryland in the East.

There are important reasons why competition from such widely separated areas is possible. Transportation and refrigeration facilities are such that it is now possible to deliver these shipments from distant points to eastern markets in practically as sound condition as that in which local supplies arrive. The question of competition narrows itself to a comparison of appearance and quality of the melons (figs. 1 and 2) and the difference in freight and refrigeration rates from these competing areas. If the melons from California and Texas are not superior in some way to those from Delaware, Maryland, and Michigan, then they can not profitably enter the same market, unless the cost of production is sufficiently low to offset the increased freight and refrigeration charges.

SUPERIORITY OF WESTERN CANTALOUPES.

A close study of the larger markets leaves no doubt that in a general way higher prices are paid for cantaloupes grown under irrigation than for those grown under rainfall. While the latter may be of equal quality at times, the quality varies more from week to week with changes in temperature, rainfall, and sunshine at the point of origin.

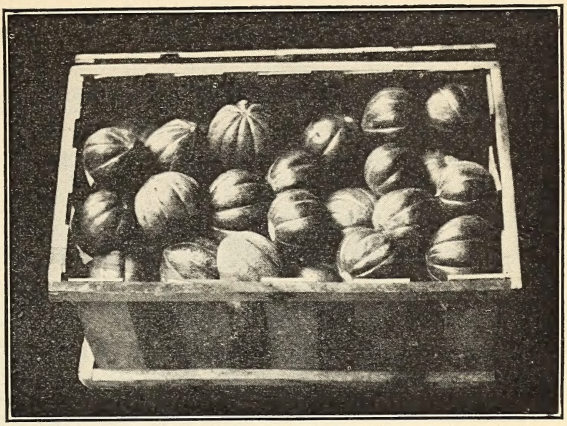


FIG. 2.—How some sections ship cataloupes to market. These melons were ungraded for size, quality, or ripeness, and did not make an attractive appearance.

If irrigation is controlled properly the western cantaloupes never lie on wet ground, and are almost entirely free from the unattractive white side which characterizes most of those grown under rainfall, especially in very wet seasons.

Table 2 gives the car-lot rates for freight and refrigeration from several well-known cantaloupe shipping sections to 12 of the large markets in the East and Middle West.

TABLE 2.—*Car-lot freight and refrigeration rates on cantaloupes in effect during the spring of 1915.*

[These rates are subject to change on legal notice.]

To—	From—											
	Brawley, El Centro, and Imperial, Cal.				Mesa, Ariz.				Las Cruces, N. Mex.			
	Freight service.		Express service.		Freight service.		Express service.		Freight service.		Express service.	
	Freight per 100 pounds.	Refrigeration per car.	Express per 100 pounds.	Refrigeration per car.	Freight per 100 pounds.	Refrigeration per car.	Express per 100 pounds.	Refrigeration per car.	Freight per 100 pounds.	Refrigeration per car.	Express per 100 pounds.	Refrigeration per car.
Albany, N. Y.	$1.25	$112.50	$2.50	$105.00	$1.25	$115.00	(a)	(a)	$0.985	$72.50	(a)	(a)
Baltimore, Md.	1.25	112.50	2.50	105.00	1.25	115.00	$2.50	$105.00	.97	72.50	$1.75	$75.00
Boston, Mass.	1.25	117.50	2.75	110.00	1.25	120.00	2.75	110.00	1.04	75.00	2.00	75.00
Buffalo, N. Y.	1.15	107.50	2.50	105.00	1.15	110.00	2.50	105.00	.86	65.00	1.75	75.00
Chicago, Ill.	1.00	97.50	2.25	90.00	1.00	100.00	2.25	90.00	.65	b .60	1.25	55.00
Cleveland, Ohio.	1.15	107.50	2.50	100.00	1.15	110.00	2.50	100.00	.83	65.00	1.75	70.00
New York City, N. Y.	1.25	112.50	2.50	105.00	1.25	115.00	2.50	105.00	1.00	72.50	1.75	75.00
Philadelphia, Pa.	1.25	112.50	2.50	105.00	1.25	115.00	2.50	105.00	.98	72.50	1.75	75.00
Pittsburgh, Pa.	1.15	107.50	2.50	100.00	1.15	110.00	2.50	100.00	.86	65.00	1.75	70.00
Rochester, N. Y.	1.25	112.50	2.50	105.00	1.25	115.00	2.50	105.00	.91	72.50	(a)	(a)
St. Louis, Mo.	1.00	97.50	2.25	85.00	1.00	100.00	2.25	85.00	.65	b .60	1.25	55.00
Washington, D. C.	1.25	112.50	2.50	105.00	1.25	115.00	2.50	105.00	.97	72.50	1.75	75.00

a No carload rates in effect. b Per 100 pounds.

TABLE 2.—*Car-lot freight and refrigeration rates on cantaloupes in effect during the spring of 1915*—Continued.

To—	From—											
	Rockyford and Las Animas, Colo.				Brownsville, Tex.				Seaford, Del.			
	Freight service.		Express service.		Freight service.		Express service.		Freight service.		Express service.	
	Freight per 100 pounds.	Refrigeration per car.	Express per 100 pounds.	Refrigeration per car.	Freight per 100 pounds.	Refrigeration per hundredweight.	Express per 100 pounds.	Refrigeration per car.	Freight per 100 pounds.	Refrigeration per package.	Express per 100 pounds.	Refrigeration.[a]
Albany, N. Y.	$0.795	$65.00	(b)	(b)	$0.994	$0.50	(b)	(b)	$0.249	$0.11	$1.20	.....
Baltimore, Md.	.78	65.00	$1.375	$50.00	.981	.50	$2.00	$65.00	.189	.095	.64	.....
Boston, Mass.	.85	65.00	1.625	50.00	1.051	.51	2.25	65.00	.315	.11	1.28	.....
Buffalo, N. Y.	.635	60.00	1.25	45.00	.816	.435	1.50	60.00	.261	.11	1.35	.....
Chicago, Ill.	.46	50.00	1.00	37.00	.65	.385	1.50	55.00	.368	.125	1.84	.....
Cleveland, Ohio.	.605	60.00	1.25	45.00	.785	.385	1.75	60.00	.261	.125	1.43	.....
New York City, N. Y.	.81	65.00	[c]1.375	[c]50.00	1.011	.50	2.00	65.00	.21	.095	.94	.....
Philadelphia, Pa.	.79	65.00	1.375	50.00	.991	.45	2.00	65.00	.189	.095	.64	.....
Pittsburgh, Pa.	.635	60.00	1.375	50.00	.816	.4025	1.75	60.00	.221	.11	1.20	.....
Rochester, N. Y.	.72	65.00	(b)	(b)	.908	.50	2.00	65.00	.249	.11	1.35	.....
St. Louis, Mo.	.41	50.00	.875	35.00	.58	.3075	1.25	50.00	.431	.14	1.99	.....
Washington, D. C.	.78	65.00	1.375	50.00	.981	.50	2.00	65.00	.221	.095	.90	.....

[a] Express company does not provide refrigerator service. If any is desired the express company will supply refrigerator cars for quantities in excess of 12,000 pounds, but shippers must furnish the ice.
[b] No carload rates in effect.
[c] Delivery at Jersey City only.

THE HOME-GROWN CROP.

In the immediate vicinity of many important markets a large acreage of cantaloupes is planted annually, and in 1914 a crop of unusual size was harvested. The quality of these melons was above the average, and the markets were kept well supplied with this stock throughout the local season. These cantaloupes can be placed on the home markets at a minimum of expense as there are no heavy freight and refrigeration charges to pay and in some cases the packages are returned to the grower. The saving in transportation charges is considerable, as indicated in Table 2.

In addition to this, the local growers have the great advantage of being able to offer dealers a daily supply of freshly picked melons. In many cases, in 1914, it was possible to dispose profitably of a large part of the local crop at prices which would not return the distant car-lot shipper his cost of transportation. As a result of this large home-grown supply the demand for melons shipped into many markets from distant areas of production was curtailed.

CONDITION AND QUALITY OF RECEIPTS.

As with most other highly perishable products, there is much complaint in the markets regarding deficiencies in the condition and quality of cantaloupes, both the home-grown stock and that which comes from a distance. There is no doubt that prices are greatly

depressed by the constant receipt of melons which are overripe, immature, or diseased. The channels of distribution become choked with this poor stock, which to be moved at all must be sold at prices which leave little or nothing for the grower. Even the better grades of cantaloupes do not bring their full value under these conditions, for the large quantities of melons of low quality and price give the buyer a lever to force down the price level for good stock. The disappointment resulting from purchasing poor cantaloupes so dulls the demand that the movement for the rest of the season is adversely affected.

While a great deal of stock evidences poor quality or condition when it arrives in the market, these disadvantages are greatly aggravated by the deterioration which takes place while the cantaloupes are in the hands of the dealer. There is a harmful tendency on the part of many cantaloupe receivers in the markets to encourage the shipment of greater supplies than they can handle promptly. Each day their surplus stock is held it becomes harder to sell, and in an endeavor to move it before it becomes a total loss the fresher receipts are often held back and begin to deteriorate in turn. If conditions are to be satisfactory to producer, distributor, and consumer it is essential that the supply of a fruit as highly perishable as cantaloupes be gauged to meet the consuming demands of a market, so that fresh stock may be received daily and distributed throughout a city without delay. It is just as important that the average receipts be of a quality calculated to stimulate the demand. Before this condition can be met there must be great improvement both in regard to eating qualities and soundness of the average run of cantaloupes shipped.

CANTALOUPE PACKAGES.

The containers in use undoubtedly have an influence upon the sale of cantaloupes. The most common packages are the "jumbo," "standard," "two-thirds," "pony," and "flat" crates. Different producing sections have their own ideas as to just what packages should be used, and as a result an assortment of types and sizes is found on most markets.

While this may not have been a large factor in determining 1914 cantaloupe prices, it is believed that more uniformity in the packages used would eliminate a good deal of the confusion noticed in the quoting and selling of the melons by wholesalers and jobbers, and would make possible desirable economies in their handling and shipping.

In seasons of heavy production the most active demand is for melons which are uniformly graded and packed, of standard size, and put

up in standard containers (fig. 3). Under such conditions it is unprofitable, as a rule, to ship the "off sizes." The shipment of pony crates in a season such as 1914 tends to clog up the markets

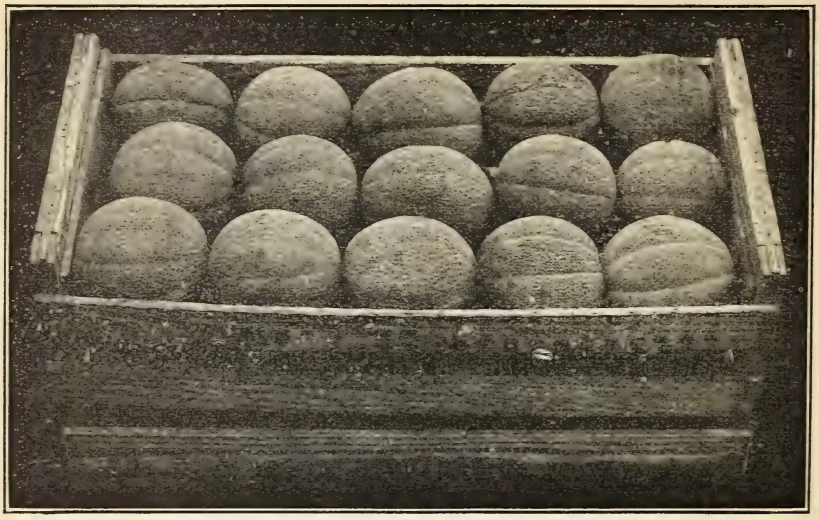


FIG. 3.—A standard crate packed with 45 well-graded melons.

with the smaller-sized fruit, which retards sales and lowers the prices on the more desirable stock.

The two packages that are used with best results are the standards, holding 45 melons (fig. 3), and the flat, holding 9 to 15 melons (fig. 4). The flat is an ideal package for the consumer if the retailer will educate him to buy in the original units. It contains no more than an

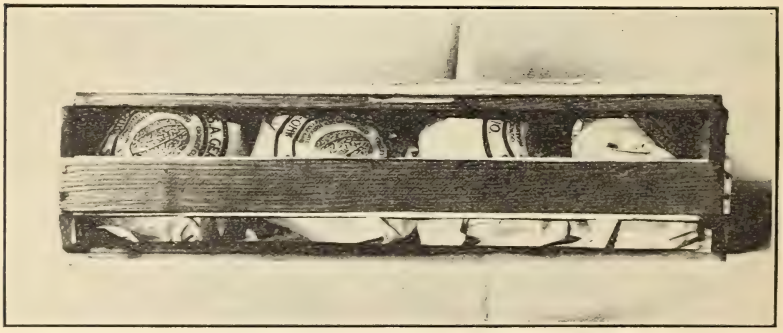


FIG. 4.—A flat crate of cantaloupes. This container is especially well adapted to the consuming trade that desires to buy in the original package.

average-sized family can use to advantage without incurring waste or decay. The use of packages of odd sizes or types should be discouraged by receivers of cantaloupes in the market. Growers who

are warned against their use should realize that the objections to such packages are well founded.

Table 3 illustrates the need for standardization of packages used in marketing cantaloupes. It shows the different types and sizes of containers which were being quoted on the Milwaukee market from three States on one day during the 1914 season:

TABLE 3.—*Cantaloupe packages in use in Milwaukee on the same day.*

From Arizona:	
Standard crates	45 melons.
Jumbo crates	36 or 45 jumbo melons.
Two-thirds crates	30 melons.
Pony crates	54 melons.
Standard flat crates	12 or 15 melons.
Pony flat crates	15 melons.
Jumbo flat crates	9 or 12 melons.
From Illinois:	
Climax baskets	14 to 20 melons.
Flat cases	10 to 18 melons.
Pony cases	16 melons.
Crates	1 bushel.
From Indiana:	
Standard crates	36 or 45 melons.
Flat—24 inches long	15 to 18 melons.
Flat—20 inches long	12 to 15 melons.
Basket crates	about ⅓ bushel.
Climax baskets	14 to 20 melons.

EFFECT OF WEATHER ON DEMAND AND PRICE.

The demand for few fruits fluctuates more quickly in response to changes in weather conditions than does that for cantaloupes. Clear, hot days stimulate consumption to its maximum while a cold, rainy period acts as a decided check, often reducing demand to the point of demoralizing prices. To local growers such an occurrence is not so detrimental as it is to those far from market who may have hundreds of cars rolling, so allotted as to give each eastern city a supply which should be its maximum under best selling conditions. In such cases a few cold, rainy days in the East may so stagnate the markets that very heavy losses result.

Such conditions occurred during September, 1914, while the shipments of Colorado "pink meats" were moving heavily. From about the 10th to the 16th of the month most of the States in the North and East experienced unusually cold weather, accompanied by rain in some sections. Light frosts were reported from several points. The effect of this was to decrease to a marked extent the demand for Colorado cantaloupes and reduce to a still lower level prices which were already ruinous to the shippers.

COMPETING CROPS.

The size of other crops competing with cantaloupes was above the ordinary during the 1914 season. These crops very evidently affect the price of and demand for cantaloupes. It is difficult for those outside of the produce trade to realize to what extent the profitable marketing of one perishable crop may be hindered when a few hundred cars of a competing product are added to the average or anticipated supply. The possibility of the consumers substituting one fruit for another is a phase of marketing that must always be borne in mind in dealing with highly perishable products. Such fruits as watermelons, peaches, plums, and grapes can easily replace cantaloupes on the average table, and when the supplies of these competing fruits are abundant and prices low a noticeable weakening in the demand for cantaloupes generally is felt.

LENGTH OF SHIPPING SEASON.

The duration of the cantaloupe season has a direct influence on the question of demand. The average length of time that cantaloupes are to be found on the principal markets is four and one-half to five months. This is a long season for any fruit, and there is danger that the consumers will be tired of cantaloupes before the supply is exhausted. Many cases were found toward the close of the 1914 season where restaurants and cafés no longer included cantaloupes in their menu, although the quality was still good and prices were low. As the trade turns to other fruits it becomes increasingly difficult to effect sales of cantaloupes.

MARKET PREFERENCES.

In some markets the preferences of dealers and of the consuming public for certain kinds of melons or certain packages are pronounced. These preferences are reflected through the grocer to the jobber and through the jobber to the wholesaler or broker. In some markets pink-fleshed melons are in greater demand than the green meats, while in other cities the opposite is true. Paper-wrapped cantaloupes are preferred by the trade of some cities on account of their attractiveness, while in others the dealers object to the paper wrapper, believing that it promotes decay by retarding evaporation after the melons sweat on being taken from a refrigerator car. The wrapper also prevents easy inspection by the buyer. Some assert that as the bright-colored wrapper becomes faded by the sun and torn to allow inspection, it detracts from, rather than adds to, the appearance of the fruit.

SOME TRADE FACTORS INFLUENCING THE MARKETING OF CANTALOUPES.

A wholesale, jobbing, or retail merchant who deals in cantaloupes has a chance to demonstrate both ability and good judgment. The high degree of perishability of this fruit demands that great care be exercised in its handling. When it is possible to avoid it, cantaloupes should not be exposed to the sun or kept in a warm place. The quickest possible movement consistent with reasonable prices should be a fixed rule with every dealer.

MARGINS OF GROSS PROFIT.

In considering the results secured by following as large a part as was possible of certain cars of cantaloupes through to the consumer it must be borne in mind that the investigations made during the season of 1914 included comparatively few cars. In order to draw fair conclusions regarding the average margins of profit received by different dealers in the handling of cantaloupes it would be necessary to conduct studies covering a far greater number of cars in a larger number of markets and extending over several seasons.

No conclusions for general application can be drawn safely from the examples which follow. The results on each car must be considered as representing individual instances of cantaloupe marketing, typical only of the conditions which existed at that point during the time the car was sold. The 1914 cantaloupe season was abnormal, supplies being heavy and ruling prices exceedingly low during most of the summer.

It must be understood that in giving detailed data on the cars of cantaloupes traced the margins mentioned represent gross profits. From these profits the dealers who bought their supplies outright were compelled to deduct all overhead expenses properly chargeable against the transaction, as well as all losses due to deterioration and decay of stock. All expenses for drayage and delivery are included in the gross profit made by the various dealers except in the case of the cars handled on commission, where the drayage from the car to the commission merchant's store is, with few exceptions, charged to the shipper.

In Table 4 figures are given on all cars of standard crates or flat crates followed, where the number of crates traced through to the consumer equaled 5 per cent or more of the contents of the car.

TABLE 4.—*Compilation of data on crates of cantaloupes traced.*

THROUGH THE CAR-LOT RECEIVER.

Office record No. of car.	Contents of car.		Number of crates traced.	Per cent of total number of crates in car.	Total delivered cost to car-lot receiver.[a]	Total amount of sales.	Car-lot receiver's gross profit or loss.[c]	Average gross profit or loss per crate.	Per cent of gross profit or loss.[c]
	Total number of crates.	Type of crate.							
1	260	Standard..	260	100	$434.60	$495.20	$60.60	$0.233	13.9
2	438	.....do.....	438	100	559.04	371.75	[d] 187.29	[d] .428	[d] 33.5
3	360	.....do.....	234	65	(e)	424.75	29.73	.127	7.0
4	360	.....do.....	239	66.4	(e)	338.45	23.69	.099	7.0
5	871	Flats.....	871	100	(e)	439.68	43.97	.050	10.0
6	768	.....do.....	768	100	(e)	393.95	39.40	.051	10.0
7	756	.....do.....	756	100	(e)	400.80	28.06	.037	7.0

THROUGH JOBBERS.

Office record No. of car.	Contents of car.		Number of crates traced.	Per cent of total number of crates in car.	Total delivered cost to jobbers.[a b]	Total amount of sales.	Jobbers' gross profit.	Average gross profit per crate bought.	Per cent of gross profit on investment.
	Total number of crates.	Type of crate.							
1	260	Standard..	200	76.9	$422.20	$440.15	$17.95	$0.09	4.3
2	438	.....do.....	279	63.7	228.44	263.38	34.94	.125	15.3
3	360	.....do.....	24	6.7	45.94	58.50	12.56	.523	27.3
4	360	.....do.....	29	8.0	50.75	61.85	11.10	.383	21.8
5	871	Flats.....	548	62.9	282.98	333.45	50.47	.092	17.8
6	768	.....do.....	No crates sold to jobbers.						
7	756	.....do.....	516	68.3	270.90	313.45	42.55	.082	15.7

THROUGH RETAILERS.

Office record No. of car	Contents of car.		Number of crates traced.	Per cent of total number of crates in car.	Total delivered cost to retailers.[a b]	Total amount of sales.	Retailers' gross profit.	Average gross profit per crate bought.	Per cent of gross profit on investment.
	Total number of crates.	Type of crate.							
1	260	Standard..	250	96.1	$543.99	$700.76	$156.77	$0.627	28.8
2	438	.....do.....	[f] 23	5.3	30.25	50.82	20.57	.894	68.0
3	360	.....do.....	29	8.1	61.20	88.76	27.56	.95	45.0
4	360	.....do.....	18	5.0	35.35	47.50	12.15	.675	34.3
5	871	Flats.....	[g] 212	24.3	122.79	282.90	160.11	.755	130.4
6	768	.....do.....	280	36.5	150.50	200.10	49.60	.177	33.0
7	756	.....do.....	[h] 206	27.2	135.35	239.16	103.81	.504	76.7

[a] All cartage charges are treated as overhead expense to the various dealers and are included in their gross profits except those charges which accrue in hauling from the cars to the commission merchants' stores. Such cartage expense is charged against the shipper.

[b] Amounts in this column include freight and express, but not cartage charges on crates sold to out-of-town "trade."

[c] Car No. 2 is the only one recorded showing a loss.

[d] Loss.

[e] Car on commission.

[f] One crate out of this number was sold to a hotel, which made a gross profit of $6.40 on the crate, or 457.1 per cent on the investment. This reduces the average gross profit of the other retail agencies to $0.644 per crate, or 49.1 per cent on their investment.

[g] Seventy-one crates out of this number were sold to hotels, dining cars, etc., where an average gross profit of $1.72 per crate was made, or 287.5 per cent on the investment. This reduces the average gross profit of the other retail agencies to $0.267 per crate, or 47 per cent on the investment.

[h] Twenty-six crates of this number were sold to hotels, dining cars, etc., where an average gross profit of $1.938 per crate was made, or 245.2 per cent on the investment. This reduces the average gross profit of the other retail agencies to $0.267 per crate, or 47 per cent on the investment.

From Table 4 and from the records of the three cars shown in Table 5 it can be seen that the average commission merchant and wholesaler suffer along with the shipper as a result of low prices and a sluggish market.

TABLE 5.—*Sales records of three cars of cantaloupes of poor quality.*

	Car 1.	Car 2.	Car 3.
Freight	$84.00	$97.15	$151.71
Refrigeration	57.75	50.00	27.55
Cartage	7.50	7.50	7.06
Commission	16.63	13.44	18.09
Net to shipper	.46	23.91	54.04
Gross sales	166.34	192.00	258.45

The first car contained 300 standard crates of Arkansas cantaloupes of poor quality which arrived on the market green; 125 crates spoiled and were a total loss.

The second car contained 769 flat crates of Rockyford, Colo., cantaloupes which arrived in poor condition, spotted and soft.

There were 866 flat crates of Colorado pink meats in the third car which were held on track two weeks before being sold because of an overloaded market. When unloaded, they spoiled quickly.

In a poor season like that of 1914 the cost of handling perishable goods is as high or higher per car than is the case in a year when the market is in a healthy condition and prices are good. On the other hand, the average returns per car to the commission merchant are lower, since his gross sales, on which his selling charge or percentage of gross profit is based, are greatly reduced. The wholesaler who invests his money in the outright purchase of the cantaloupes must do his regular work of handling a car under conditions which reduce his profits in a marked way. The slow movement of the fruit means greater loss through deterioration, while the heavy receipts of melons often compel him to cut his prices in order to effect sales, thereby reducing his margin of profit. It is a well-known saying in the wholesale and commission trade that no one makes money when stuff is cheap, a statement which has been born of long experience. As a rule, the losses occasioned by a poor year are felt less keenly by the jobber and retailer. They buy in smaller quantities from day to day, and their financial risks are therefore much less.

From the data in Table 4 the gross margins of the retailer of cantaloupes may appear excessive. The average retailer is burdened with high overhead charges not generally appreciated by the public at large. In most cases he operates under heavy expenses, such as rent, clerical, delivery, and telephone service, the comparatively large expenditure for accounting due to the wide extension of credit, and the actual money losses which result from worthless accounts and the deterioration of the perishable products handled.

CAR-LOT, JOBBING, AND RETAIL PRICES.

In figure 5 the relation is shown between the average car-lot, jobbing, and retail prices of cantaloupes as secured over a period of 33 days in a large western market. In plotting this curve the cost to the consumer is figured per crate. It is understood, of course, that practically all sales were actually made per melon, and if the retailers had been able to sell by the crate the prices named to the consumer would have been substantially lower. These prices are not taken from published quotations but were obtained by the daily personal investigations of a member of the field force.

THE RETAILING OF CANTALOUPES.

In his position at the end of the line of agencies which distributes foodstuffs from the farm to the consumer, the retailer performs the same important functions in the marketing of cantaloupes that he

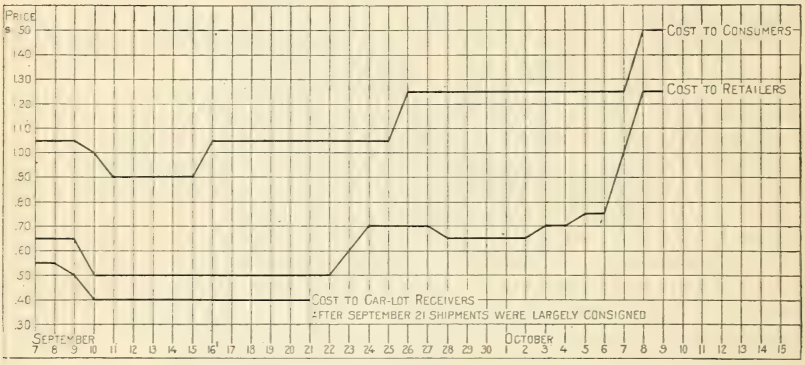


FIG. 5.—Chart showing the relation of the car-lot, jobbing, and retail prices on flat crates of Rocky Ford cantaloupes holding 15 melons in a large western market from September 7 to October 9, 1914.

does in the case of other perishable products. There is no doubt that he could increase the consumption of these highly perishable products by a change in his system of handling them and by the use of more up-to-date and efficient methods in distributing them.

Observations in the markets lead to the conclusion that the retailer could stimulate the consumption of cantaloupes by featuring them through display and attractive prices. Intelligent buying on his part and careful handling in the store, combined with the more rapid movement which would be occasioned by the lower prices, would greatly reduce his loss through deterioration. If this plan were not being followed successfully by numbers of progressive retailers, it could not be advocated with such confidence, but it repeatedly has been proved to be profitable, in spite of the handicaps under which the green grocer and fruit dealer work. The

poor quality and condition of many of the perishable products which they are forced to buy seem to be the greatest of these handicaps.

In the marketing of cantaloupes there is a good opportunity for retailers to increase their sales and reduce their losses by encouraging consumers to buy flat crates containing from 9 to 15 melons. A family of average size can easily use this number before they spoil by selecting the ripest each day and allowing the greener cantaloupes to mature. The consumer profits by getting fresh goods that have not been injured by repeated handling and at a considerable saving in cost, since the retailer can afford to work on a small margin when he sells in the original package. The retail agencies, in turn, gain by increased sales and quick turnovers, fewer poor melons returned, and reduced loss through deterioration. Instances were noticed where progressive stores employed this method and in a short time built up their trade from 2 or 3 to from 15 to 25 flat crates per day.

CANTALOUPE SHIPMENTS IN 1914.

Early in the spring of 1915 inquiries were addressed to railroad station agents at points where cantaloupes were believed to originate in carloads, asking for a complete record of the shipments during 1914. As the result of these inquiries the department has secured a fairly complete list of the points shipping cantaloupes in 1914, together with the number of carloads shipped from each. These figures have been checked to a large extent by general railroad officials of the lines on which most of the cantaloupes originate.

The map, charts, and tabulations which are the result of this inquiry should be of interest and value to the grower, the shipper, the distributor, and to all of those engaged in the handling of the cantaloupe crop.

POSSIBLE SOURCES OF ERROR.

It is very difficult to secure a complete tabulation of shipments of any perishable fruit or vegetable. This is especially true of any commodity produced in large quantities in the immediate vicinity of consuming centers. The transportation in such cases may be largely by wagon, truck, or trolley, and consequently the information if obtainable at all must be gathered from a large number of sources. In those localities where there are many shipments by boat the compilation of statistics on a carload basis is exceedingly difficult. In some cases it is probable that the tabulation here given is incomplete as to such shipments, and the figures presented were obtained by reducing crates and other packages to equivalent carloads.

EXPLANATION OF MAP.

In the map (fig. 6) showing the cantaloupe shipments in 1914 each dot represents five cars or fraction thereof. These dots are grouped in the county in which the stations are located, although it is well known that production does not actually follow county lines. In cases where the shipments are too heavy to be represented by dots, the counties have been blacked in and the actual number of cars shipped is given in figures. The size of the blackened area is not in proportion to the quantity shipped, as the tabulation plainly shows. The use of the county as a unit is merely for convenience and can not locate accurately the exact boundaries of producing areas.

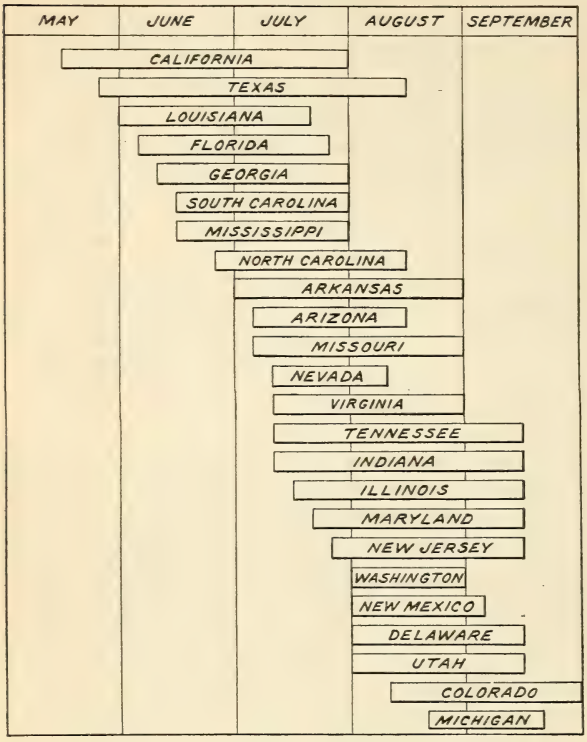
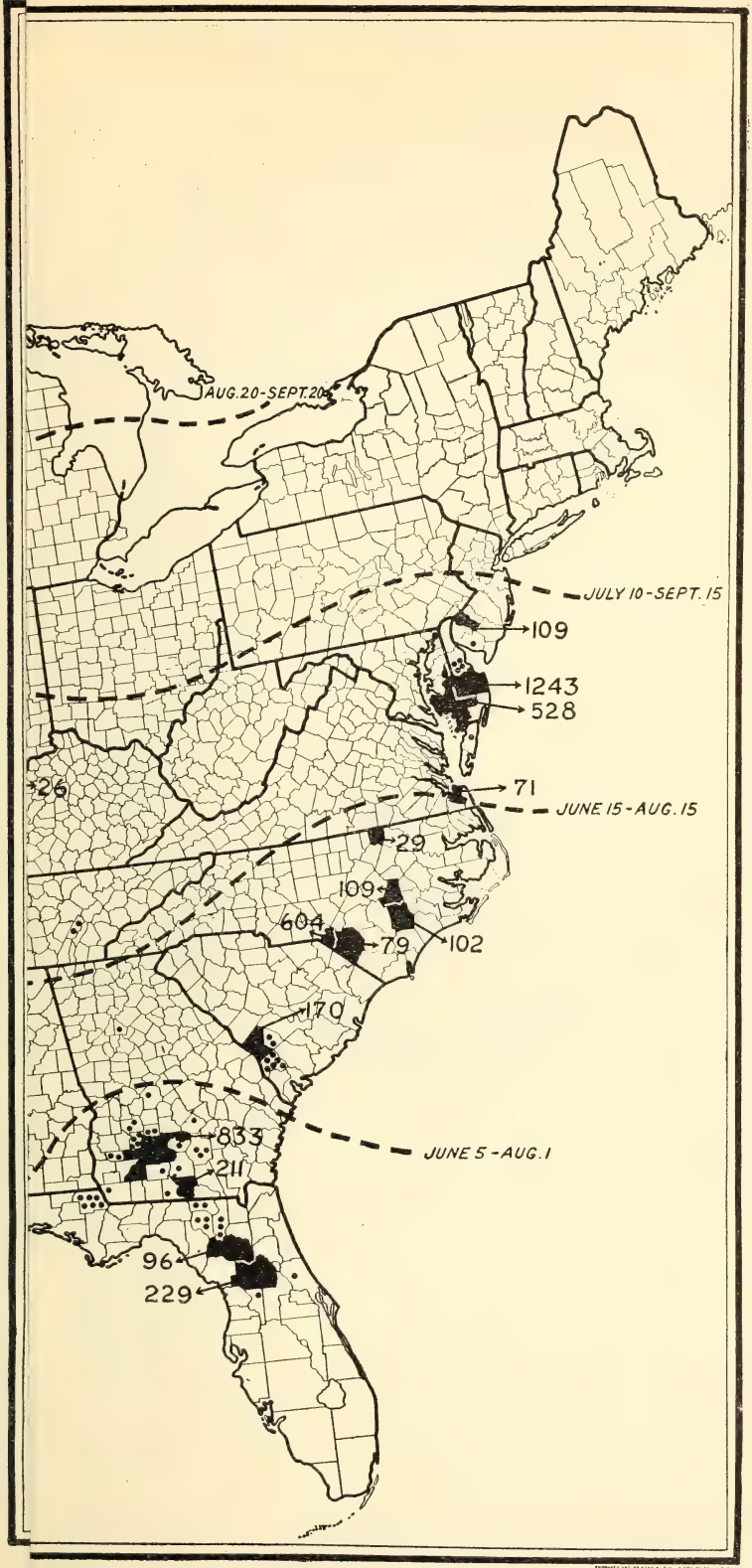


FIG. 7.—Cantaloupe shipping seasons.

SHIPPING DATES.

The dates within which the various areas shipped cantaloupes are shown by curved lines, all the areas shipping at a given period being grouped under the line representing that period. The first important commercial shipments of cantaloupes were from the Imperial Valley in California. These were followed closely by shipments from Florida and southern Texas, and after that the sources of supply were very widely distributed and numerous areas were in competition. These seasonal lines with their dates are subject to some changes from year to year. However, they furnish a general view of competing areas and shipping seasons which will be of value to those interested in cantaloupe marketing.



rloads indicated by figures.

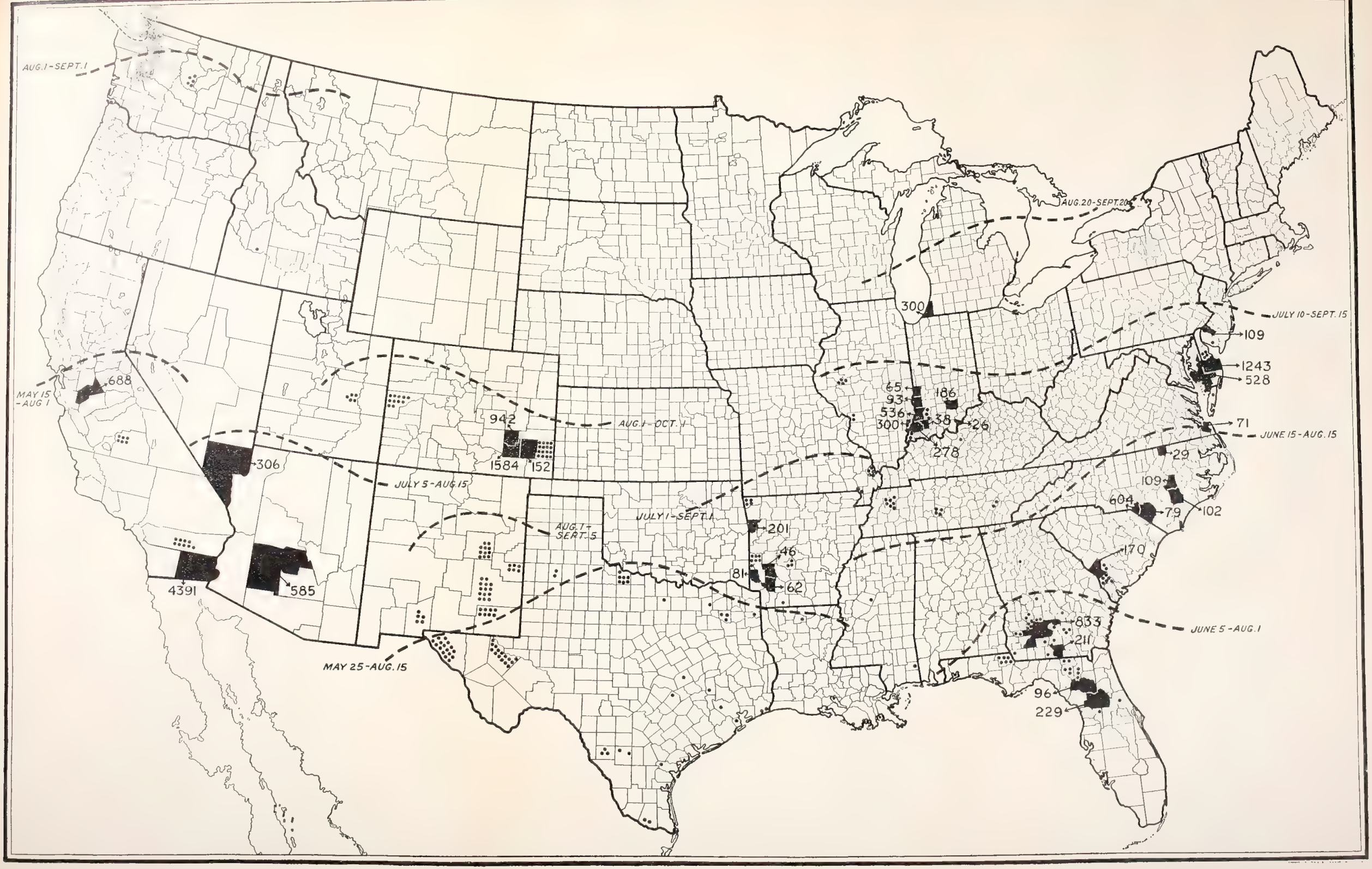


FIG. 6.—Map showing cantaloupe shipments in 1914. Each dot represents five carloads (or fraction thereof). The black areas represent the number of carloads indicated by figures.

7710°—Bull. 315—15. (To face page 16.)

EXPLANATION OF CHARTS.

This same information is illustrated in the accompanying chart (fig. 7) which shows graphically how the shipping seasons of the various States may overlap. In connection with this chart it should be understood that the number of carloads shipped in the beginning of the season is often small, but increases rapidly as the season progresses, frequently reaching a maximum before the middle of the season and then gradually diminishing to its close.

The number of cars shipped from each State is also illustrated by a chart (fig. 8) which shows graphically the relative number of carloads shipped from stations in each State.

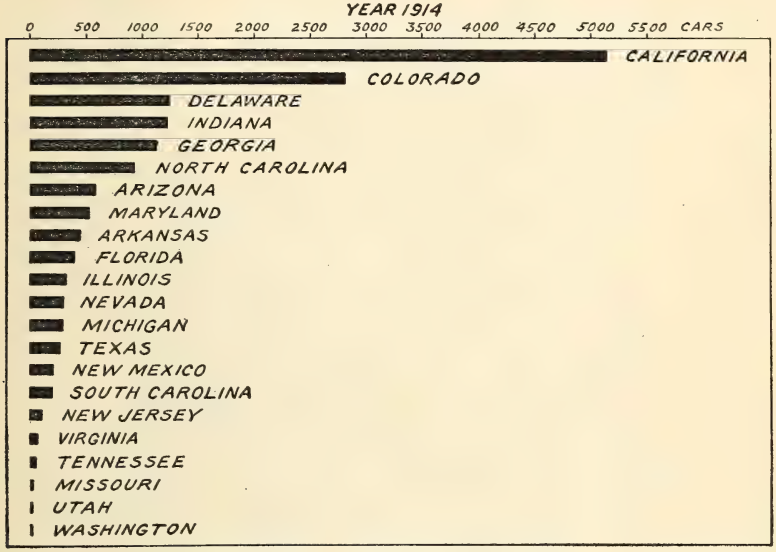


FIG. 8.—Relative bulk of cantaloupe shipments.

TABULAR STATEMENT.

The tabular statement which follows shows the cantaloupe shipping stations arranged in the order of their importance within each State, together with the actual number of cars reported shipped therefrom during the 1914 season. Seasonal variations are so great, however, that many of these figures may differ radically from the shipments usually made from those districts.

In many cases certain stations are credited in the tabulation with less-than-car-lot shipments. These stations normally ship in full carloads, but on account of some abnormal condition in 1914 they did not ship their customary quantities. Less-than-car-lot shipments have been obtained as far as possible for all stations shipping any full carloads. These shipments have been reduced to equivalent carloads and are included in the tabulation.

Cantaloupe shipments, 1914.

ARIZONA.

(July 5 to Aug. 15.)

	Carloads.
Mesa	354
Glendale	231
State total	585

ARKANSAS.

(July 1 to Sept. 1.)

Van Buren	185
Gillham	41
Horatio	39
Delight	27
Blevins	24
Highland	19
Grannis	17
Wickes	14
Malvern	13
Gravette	12
Alma	11
McCaskill	11
Dotson	10
Deaneyville	7
Hope	6
Mulberry	5
Sulphur Springs	4
Belton	3
Shady Grove	3
De Queen	1
Tokio	1
State total	453

CALIFORNIA.

(May 15 to Aug. 1)

Brawley	2,411
Heber	777
Keystone (Grape)	606
Turlock	524
Calexico	438
Keyes	164
El Centro	152
Sultana	26
Coachella	21
Thermal	20
Imperial	4
Meloland	3
State total	5,146

COLORADO.

(Aug. 10 to Oct. 1.)

Rocky ford	1,008
Ordway	878
Swink	224
La Junta	133
Lafayette	108
Manzanola	84
Las Animas	80
Melonfield	72
Clifton	54
Koen	44
Sugar City	36
Holly	31
Olney Springs	28
Fowler	17
Cheraw	8
Weitzer	2
Bristol	1
Lamar	1
State total	2,809

DELAWARE.

(Aug. 1 to Sept. 15.)

	Carloads.
Seaford	402
Bridgeville	328
Laurel	229
Delmar	170
Ross	53
Cannon	45
Houston	15
Oak Grove	9
Millsboro	4
Frankford	3
Dover	2
State total	1,260

FLORIDA.

(June 5 to July 25.)

Sparr	57
Anthony	54
Kendrick	52
Gainesville	47
Trenton	25
Grand Ridge	19
Fort White	10
Branford	9
Dunnellon	6
Oak	5
Ocala	5
Jennings	4
Melrose	4
Orangehome	2
DeLeon Springs	1
Jasper	1
Other stations	89
State total	390

GEORGIA.

(June 10 to Aug. 1.)

Camilla	239
Valdosta	188
Pelham	89
Sylvester	86
Fitzgerald	70
Tifton	59
Ashburn	44
Lester	42
Sale City	29
Albany	24
Sycamore	22
Poulan	18
Rogersville	16
Newsom	14
Baconton Station	12
Douglas	10
Spence Siding	10
Arabi	8
Maddox	8
Oakfield	7
Arlington	5
Sparks	5
Chehaw	4
Ellenton	3
Barretts	2
McRae	2
West Green	2
Bemiss	1
Fort Valley	1
Hopedale	1
Leary	1
Lela	1
Mystic	1
Powersville	1
Quitman	1
Stone Mountain	1
Perry	1
Other stations	92
State total	1,120

IDAHO.

(Aug. 10 to Sept. 15.)

	Carloads.
Hammett	1
State total	1

ILLINOIS.

(July 15 to Sept. 15.)

Mount Carmel	300
Beardstown	18
Woodriver	7
State total	325

INDIANA.

(July 10 to Sept. 15.)

Decker	278
Purcell	121
Johnson	108
Antioch	100
Seymour	80
Terre Haute	65
Vollmer	62
Brownstown	60
Carlisle	56
Patoka	53
Vincennes	53
Vallonia	46
Petersburg	38
New Lebanon	37
Duncan	26
Oaktown	21
Hazleton	8
Mandabach	6
Princeton	6
Stewartsville	6
Sandy Hook	5
Maysville	4
Owensville	3
Cantaloupe	1
State total	1,243

KENTUCKY.

(Aug. 10 to Sept. 15.)

Elizabethtown	3
State total	3

LOUISIANA.

(June 1 to July 20.)

Choudrant	3
Dubach	1
Ruston	1
State total	5

MARYLAND.

(July 20 to Sept. 15.)

Salisbury	169
Federalsburg	121
Hurlock	112
Fruitland	90
Preston	18
East New Market	6
Henderson	6
Eden	4
Williamsburg	2
State total	528

Cantaloupe shipments, 1914—Continued.

MICHIGAN.

(Aug. 20 to Sept. 20.)

	Carloads.
Benton Harbor	270
Coloma	20
Watervliet	10
State total	300

MISSISSIPPI.

(June 15 to Aug. 1.)

Durant	5
Shipman	1
State total	6

MISSOURI.

(July 5 to Sept. 1.)

Morley	23
Clarkton	6
State total	29

NEVADA.

(July 10 to Aug. 10.)

Moapa	306
State total	306

NEW JERSEY.

(July 25 to Sept. 15.)

Swedesboro	72
Mickleton	17
Woodbury	13
Clarksboro	6
Harrisonville	1
Mauricetown	1
State total	110

NEW MEXICO.

(Aug. 1 to Sept. 5.)

Roswell	66
Fort Sumner	55
Portales	29
Artesia	25

NEW MEXICO—Continued.

	Carloads.
Las Cruces	18
Lakewood	14
Mesilla Park	5
State total	212

NORTH CAROLINA.

(June 25 to Aug. 15.)

Laurinburg	355
Calypso	102
Mount Olive	96
Johns	93
Hasty	55
Maxton	45
Omohundro Siding	39
Elmore	37
Alma	31
Ridgeway	29
Covington Siding	16
Old Hundred	9
Goldsboro	7
Dudley	6
Red Springs	3
State total	923

SOUTH CAROLINA.

(June 15 to Aug. 1.)

Blackville	131
Estill	29
Williston	20
Ulmers	5
Govan	4
Sycamore	2
Other stations	14
State total	205

TENNESSEE.

(July 10 to Sept. 15.)

Humboldt	27
Pleasant Grove	17
Dayton	7
Greenfield	1
State total	52

TEXAS.

(May 25 to Aug. 15.)

	Carloads.
Clint	74
Pecos	67
Vernon	35
Carrizo Springs	12
Winnsboro	11
Plain View	10
Sabine Pass	10
Cotulla	5
Fowlerton	5
Mathis	5
Elgin	4
Hoban	4
Jefferson	4
Mission	4
Verhalen	4
Fabens	3
League City	3
McAllen	3
Asherton	2
Navasota	2
Addicks	1
Alvord	1
Campbell	1
Minerva	1
State total	271

UTAH.

(Aug. 1 to Sept. 1.)

Greenriver	24
State total	24

VIRGINIA.

(July 10 to Sept. 1.)

Norfolk section	71
Parksley	2
State total	73

WASHINGTON.

(Aug. 1 to Sept. 1.)

Wenatchee	22
State total	22
Grand total	16,401

PUBLICATIONS OF U. S. DEPARTMENT OF AGRICULTURE RELATING TO MARKETING OF FARM PRODUCTS.

AVAILABLE FOR FREE DISTRIBUTION.

Strawberry Supply and Distribution in 1914. Department Bulletin 237.
Outlets and Methods of Sale for Shippers of Fruits and Vegetables. Department Bulletin 266.
Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets. Department Bulletin 267.
Factors Governing the Successful Shipment of Red Raspberries from the Puyallup Valley. Department Bulletin 274.
Peach Supply and Distribution in 1914. Department Bulletin 298.
Rail Shipments and Distribution of Fresh Tomatoes, 1914. Department Bulletin 290.
Apple Market Investigations, 1914–15. Department Bulletin 302.

FOR SALE BY THE SUPERINTENDENT OF DOCUMENTS.

Factors Governing the Successful Shipment of Oranges from Florida. Department Bulletin 63. Price, 20 cents.
Cooperation in the Handling and Marketing of Fruit. Separate 546 from Yearbook 1910. Price, 5 cents.
A Successful Method of Marketing Vegetable Products. Separate 597 from Yearbook 1912. Price, 5 cents.
Retail Public Markets. Separate 636 from Yearbook 1914. Price 5 cents.
Cooperative Marketing and Financing of Marketing Associations. Separate 637 from Yearbook 1914. Price, 5 cents.
System of Marketing Farm Products and Demand for Such Products at Trade Centers. Report 98, Office of the Secretary. Price, 25 cents.

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
5 CENTS PER COPY

WASHINGTON : GOVERNMENT PRINTING OFFICE : 1915